## Claims

1.     A method of assigning agents of an automatic
call distributor to incoming calls of a plurality of
call types handled by the automatic call distributor,
such method comprising the steps of:

determining a target occupancy matrix including
a target occupancy for each agent of the agents of
the automatic call distributor for each call type of
the plurality of call types;

processing a call of a first type of the types
determined in the target occupancy matrix; and

assigning the call to an agent of the agents of
the automatic call distributor with a largest
relative difference between an actual occupancy of
calls of the first type handled by the agent and the
target occupancy of calls of the first type
determined for the agent in the target occupancy
matrix.

2.     The method of assigning agents as in claim 1
further comprising generating the target matrix from
permanent, semi-permanent and variable data.

3.     The method of assigning agents as in claim 2
wherein the step of generating the target matrix from
the permanent data further comprises defining a
plurality of work types where each work type
characterizes at least some of the incoming call
types.

4.     The method of assigning agents as in claim 3
wherein the step of generating the target matrix from
the permanent data further comprises providing a list

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of agent skill types required for each work type of the incoming call types.

5.    The method of assigning agents as in claim 4 wherein the step of generating the target matrix from the permanent data further comprises providing a minimum agent skill level required by each work type of the incoming call types.

6.    The method of assigning agents as in claim 5 wherein the step of generating the target matrix from the semi-permanent data further comprises providing a skill level of each agent with respect to each skill type required by each work type of the incoming call types.

7.    The method of assigning agents as in claim 6 wherein the variable data further comprises manually providing a target occupancy level for at least some agents of the target matrix.

8.    The method of assigning agents as in claim 2 wherein the step of generating the target matrix further comprising randomly assigning work type occupancies to each agent of the plurality of agents within the target matrix.

9.    The method of assigning agents as in claim 8 wherein the step of randomly assigning work type occupancies to each agent of the plurality of agents within the target matrix further comprises iterativly repairing the target matrix.

10.   The method of assigning agents as in claim 9 wherein the step of iterativly repairing the target

matrix further comprises sequentially selecting an agent and randomly selecting a work type.

11.   The method of assigning agents as in claim 10 wherein the step of sequentially selecting an agent and randomly selecting a work type further comprises assigning a fractional occupancy of the agent to the randomly selected work type, thereby generating a new target matrix.

12.   The method of assigning agents as in claim 11 wherein the step of sequentially selecting an agent and randomly selecting a work type further comprises calculating a change in an objective function of the new target matrix.

13.   The method of assigning agents as in claim 12 wherein the step of calculating a change in an objective function of the new target matrix further comprises adopting the new target matrix as the repaired matrix when the calculated change is less than zero.

14.   Apparatus for assigning agents of an automatic call distributor to incoming calls of a plurality of call types handled by the automatic call distributor, such apparatus comprising:
      means for determining a target occupancy matrix including a target occupancy for each agent of the agents of the automatic call distributor for each call type of the plurality of call types;
      means for processing a call of a first type of the types determined in the target occupancy matrix; and

means for assigning the call to an agent of the agents of the automatic call distributor with a largest relative difference between an actual occupancy of calls of the first type handled by the

5 agent and the target occupancy of calls of the first type determined for the agent in the target occupancy matrix.

15. The apparatus for assigning agents as in claim
10 14 further comprising means for generating the target matrix from a plurality of permanent, semi-permanent and variable data.

16. The apparatus for assigning agents as in claim
15 15 wherein the means for generating the target matrix from the permanent data further comprises means for defining a plurality of work types where each work type characterizes at least some of the incoming call types.

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17. The apparatus for assigning agents as in claim 16 wherein the means for generating further comprises means for providing a list of agent skill types required for each work type of the incoming call
25 types.

18. The apparatus for assigning agents as in claim 17 wherein the means for generating further comprises means for providing a minimum agent skill level
30 required by each work type of the incoming call types.

19. The apparatus for assigning agents as in claim 18 wherein the means for generating further comprises
35 means for providing a skill level of each agent with

respect to each skill type required by each work type
of the incoming call types.

20. The apparatus for assigning agents as in claim
19 wherein the means for generating further
comprises means for manually providing a target
occupancy level for at least some agents of the
target matrix.

21. The method of assigning agents as in claim 15
wherein the means for generating the target matrix
further comprising means for randomly assigning work
type occupancies to each agent of the plurality of
agents within the target matrix.

22. The apparatus for assigning agents as in claim
21 wherein the means for randomly assigning work type
occupancies to each agent of the plurality of agents
within the target matrix further comprises means for
iterativly repairing the target matrix.

23. The apparatus for assigning agents as in claim
22 wherein the means for iterativly repairing the
target matrix further comprises means for
sequentially selecting an agent and randomly
selecting a work type.

24. The apparatus for assigning agents as in claim
23 wherein the means for sequentially selecting an
agent and randomly selecting a work type further
comprises means for assigning a fractional occupancy
of the agent to the randomly selected work type,
thereby generating a new target matrix.

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25. The apparatus for assiging agents as in claim 24 wherein the means for sequentially selecting an agent and randomly selecting a work type further comprises means for calculating a change in an objective function of the new target matrix.

26. The apparatus for assigning agents as in claim 25 wherein the means for calculating a change in an objective function of the new target matrix further comprises means for adopting the new target matrix as the repaired matrix when the calculated change is less than zero.

27. Apparatus for assigning agents of an automatic call distributor to incoming calls of a plurality of call types handled by the automatic call distributor, such apparatus comprising:

a matrix processor adapted to determine a target occupancy matrix including a target occupancy for each agent of the agents of the automatic call distributor for each call type of the plurality of call types;

a call processor adapted to process a call of a first type of the types determined in the target occupancy matrix; and

a call distributor adapted to assign the call to an agent of the agents of the automatic call distributor with a largest relative difference between an actual occupancy of calls of the first type handled by the agent and the target occupancy of calls of the first type determined for the agent in the target occupancy matrix.

28. The apparatus for assigning agents as in claim 27 further comprising a plurality of permanent, semi-permanent and variable data.

29. The apparatus for assigning agents as in claim 28 wherein the permanent data further comprises a plurality of work types where each work type characterizes at least some of the incoming call types.

30. The apparatus for assigning agents as in claim 29 wherein the matrix processor further comprises a list of agent skill types required for each work type of the incoming call types.

31. The apparatus for assigning agents as in claim 30 wherein the matrix processor further comprises a minimum agent skill level required by each work type of the incoming call types.

32. The apparatus for assigning agents as in claim 31 wherein the matrix processor further comprises a skill level of each agent with respect to each skill type required by each work type of the incoming call types.

33. The apparatus for assigning agents as in claim 33 wherein the matrix processor further comprises a manually entered target occupancy level for at least some agents of the target matrix.

34. The method of assigning agents as in claim 33 wherein the matrix processor further comprising a selection processor adapted to randomly assign work

type occupancies to each agent of the plurality of
agents within the target matrix.

35. The apparatus for assigning agents as in claim
34 wherein the selection processor further comprises
a repair processor adapted to iterativly repair the
target matrix.

36. The apparatus for assigning agents as in claim
35 wherein the repair processor further comprises an
objective function processor adapted to calculate a
change in an objective function of the new target
matrix.

37. The apparatus for assigning agents as in claim
36 wherein the objective function processor further
comprises a update processor adapted to adopt the new
target matrix as the repaired matrix when the
calculated change is less than zero.

38. A method of assigning a plurality of agents to
incoming calls by an automatic call distributor, such
method comprising the steps of:
        determining a target matrix specifying a mix and
proportion of call types to be handled by each agent
of the plurality of agents;
        receiving and assigning calls based upon the mix
and proportion of call types specified in the target
matrix with agent selection based upon an actual
occupancy of the target matrix by the agent and a
relative difference between the actual occupancy and
the target matrix.